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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,194	12/15/2000	Emmanuel Vyers	NCP3-E42	1141

7590

12/06/2002

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EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 12/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/738,194

Applicant(s)

VYERS ET AL.

Examiner

Ramesh Krishnamurthy

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 - 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 - 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

This office action is responsive to communications filed on 11/19/02.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 22 - 31 been renumbered 23 - 32. There were two claims numbered "22". The second of these claims has been renumbered as 23 and all subsequent claims have been similarly renumbered.

Claims 9 – 32 are pending.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/19/02 has been entered.

2. The declaration by Per M. Cederstav under 37 CFR 1.132 filed 11/19/02 is insufficient to overcome the rejection of claims 9 - 18 based upon rejection under 35 U.S.C. 103 (a) as set forth in the last Office action (paper no. 6) because: It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective

Art Unit: 3753

evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

3. The declaration by David Kruse under 37 CFR 1.132 filed 11/19/02 is sufficient to overcome the rejection of claims 9 - 18 based upon the rejection under 35 U.S.C. 103 (a) as set forth in the last office action (Paper no. 6). While the declaration of David Kruse does not address the claims of the instant application directly, it does point out that Fitzgerald reference uses a time-shifted valve position signal in the feed-back loop and thus the valve position feed back signal in Fitzgerald reference would not correspond to the valve position feedback signal (that corresponds to the position of the valve to which it has been moved) as recited in the third generating step of claim 9 and the direction/speed command signal generating step in claim 14.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed direct attachment between motor drive and valve stem (claims 13 and 18) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Claim 19 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 9. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is

proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

6. Claim 26 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 14. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

7. Claims 25 and 32 are objected to since in each of the claims it appears that "hwerein" should be replaced with - - wherein - -.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 9 – 32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Each of the independent claims 9, 14, 19 and 25 recites the limitation "initial generating an originating valve position feedback signal comprising data representing the position of a motor drive operatively connected to a valve when said valve resides in an originating position, said originating position defined as the position of said valve prior to commencement of said fluid flow control" that has not been disclosed in the application as originally filed.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3753

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 9 – 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of the independent claims 9 and 19 recites the limitation “repeating said third generating, said actuating and said fourth generating steps until said pressure is controlled adequately “ in lines 22 and 23. Similarly, each of the independent claims 14 and 25 recites the limitation “repeating said direction/speed command signal generating step, said actuating step and said valve position feedback signal generating step until said conduit fluid flow and said chamber pressure are controlled adequately” in lines 21 – 23. However, in each of these claims it is not clear as to how the pressure is controlled adequately since after the valve is moved to a new position, the pressure within the chamber would change but a corresponding pressure signal is not generated at all, rendering the claims indefinite.

It is suggested that in the repeating step, all the steps beginning with the pressure sensor signal generating step be included and that the initial generating step related to originating valve position feedback signal be omitted and that “said valve position feedback signal” in the third generating step in Claim 9, for example, be replaced with - - valve position feedback signal - - (with similar changes in other independent claims).

Claim 12 recites the limitation “a motor drive” in line 2. This appears to be a double inclusion of “a motor drive” recited in line 2 of claim 11, rendering the claim

Art Unit: 3753

indefinite. It is noted that the limitations recited in claims 12 and 13 have been recited in the parent claim 11 and as such claims 12 and 13 fail to further limit the parent claim 11.

Claim 17 recites the limitation "a motor drive" in line 2. This appears to be a double inclusion of "a motor drive" recited in line 2 of claim 16, rendering the claim indefinite. It is noted that the limitations recited in claims 17 and 18 have been recited in the parent claim 16 and as such claims 17 and 18 fail to further limit the parent claim 16.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 9, 10, 14, 15 and 19, 20, 22 and 24 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art cited by the applicant on pages 2 – 8 of the specification and in Figs. 1 – 3 in view of Lenz et al.

The prior art cited by the applicant on pages 2 – 8 of the specification and in Figs. 1 – 3 anticipates the method recited in claims 9, 10, 14, 15 and 19, 20, 22 and 24 – 32 with the exception of having a valve position feedback signal.

Lenz et al. discloses (Col. 1, lines 60 – 63 & element (55) in Fig. 2) that it is known in the art to use a position sensor that provides a feedback signal comprising data representing position of a motor drive (76, 70) actuating the valve for the purpose of providing an indication of the position of the valve thereby improving the accuracy of the valve control.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a position sensor in the prior-art arrangement disclosed by the applicant for the purpose of providing an indication of the position of the valve thereby improving the accuracy of the valve control. In the prior-art arrangement disclosed by the applicant only an indirect inference of the valve position was possible via the measured pressure each time the valve was moved to a new position. Having a position sensor connected to the motor drive actuating the valve would provide a direct indication of the valve position.

15. Claims 11 – 13 and 16 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art – Lenz et al. combination as applied to claims 9, 10, 14, 15 and 19, 20, 22 and 24 – 32 above, and further in view of Scholl et al.

The method according to the combination of the Prior Art and Lenz et al. discloses the claimed method with the exception of having a direct attachment between the motor drive and the valve stem.

The patent to Scholl et al. discloses (Fig. 3 and Col. 3, line 50 – Col. 4, line 16) that it is known in the art to directly couple a motor drive via motor shaft to a valve stem for the purpose of obtaining simplicity, efficiency and cost effectiveness (Col. 4, lines 47 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have directly connected the motor drive to the valve stem in the method according to the combination of the Prior Art and Lenz et al. for the purpose of obtaining simplicity, efficiency and cost effectiveness as recognized by Scholl et al..

16. Claims 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and also in a manner that would overcome the rejections under 35 U.S.C first and second paragraphs, as set forth above.

17. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record neither shows nor teaches a combination for the step of having a motor drive assembly position comprising a rotational position of a reduction gear means. The Fitzgerald reference is not applicable for the reasons set forth in paragraph 3 above.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawai discloses a rotary valve with a corresponding position sensor. Tice discloses a feed back motor-operated valve. Palmer discloses a flow control valve for controlling flow through a conduit. Beyer et al. discloses apparatus and

Art Unit: 3753

method for regulating pressure in a chamber. McMillin et al. discloses method and apparatus for pressure control in vacuum processors. Welz, Jr. et al. discloses an intelligent valve actuator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Buiz, can be reached on (703) 308 - 0871. The fax phone number for the organization where this application or proceeding is assigned is (703) 308 - 7765.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

Ramesh Krishnamurthy
Examiner
Art Unit 3753
December 3, 2002



[Signature]
Supervisory Patent Examiner
US Patent & Trademark Office

12/4/02